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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/693,045 | 10/24/2003 | James W. Robins | 11241-0031 | 1560 |

7590 06/01/2005

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| EXAMINER |
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KASTLER, SCOTT R

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| ART UNIT | PAPER NUMBER |
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1742

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,045

Applicant(s)

ROBINS ET AL.

Examiner

Scott Kastler

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/24/04, 3/22/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Means Plus Function Language

The means plus function language appearing in the instant claims has been interpreted as follows:

1. “means for loading” (claims 2 and 11) has been interpreted as per the definition of this term found at page 6, third paragraph of the instant specification.

2. “sensor gripping means” (claims 8 and 17) has been interpreted as per the definition of this term found at page 8 last paragraph to page 9 first paragraph of the instant specification.

3. “means for introducing” (claims 9 and 18) has been interpreted as per the definition of this term found at page 10, lines 11-19 of the instant specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 8-12, 14, 15 and 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Fradeneck. Fradeneck teaches a metal making lance assembly, where the term “assembly” denotes components employed together, but does not require the mechanical attachment together of all of the components, including a lance barrel and tip including a nozzle attached to the barrel (13) for discharging gaseous or particulates into vessel (10), a sensor feed tube (16) accommodating the passage of a disposable sensor (21), where the feed tube (16) is external, coaxial, parallel to the axis of, separate and isolated from fluid communication with the

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nozzle of lance (13), the sensor being suitable for the measurement of bath temperature (see claim 3 for example), and where the sensors comprise a plurality of sensors (see col. 3 lines 33-50 for example) that are loaded into the tube (16) by loading means (17) including sensor gripping means, and including control and data receiver means (28, 69 and 70) meeting the requirements of instant claims 20-22, where a flow of pressurized gas is introduced into the sensor tube (16) (see col. 2 lines 59-65 for example), thereby showing all aspects of the above claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-11 and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fradeneck in view of Maatsch. As applied to claim 1 above, Fradeneck shows all aspects of the above claims except the disposition of the sensor and sensor feed tube within the lance barrel and connected to the lance tip. Maatsch teaches that at the time the invention was made, it was known in the lance art to arrange sensors (6) and attendant feed tubes (9, 11) inside of a lance barrel in order to more accurately monitor the reaction performance of the oxygen blowing process performed by the lance (1). Because improved accuracy of the monitoring of the lance blowing operation would also be desirable in Fradeneck, motivation to arrange the sensor feed tube (16) and sensor arrangement interiorly of the lance (13), in the manner taught to be

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advantageous by Maatsch, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Scott Kastler
Primary Examiner
Art Unit 1742

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